The official voice of the Air Force Research Laboratory
news@afrl
Meet AFRL
November 2002

CAESAR research brings scientist out of shell

by Amy Hill, Ball Aerospace & Technolgies Corporation

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Kathleen Robinette is the Principal Research Anthropologist of the U.S. Air Force. Although a wife, the mother of two teenage sons, and a semi-retired practical joker, Robinette may be best known for her work with the Civilian American and European Surface Anthropometry Resource or CAESAR.

In June 2002, Robinette received the Award for Women in Government from Good Housekeeping magazine and the Center for American Politics for CAESAR—the world's first three-dimensional (3-D) survey of body measurements and sizes.

Robinette spent more than ten years pioneering much of the technology that made CAESAR possible. In 1986, Robinette helped produced the first 3-D head scanner, whose data is used today to improve the fit of Panoramic Night-Vision Goggles (PNVGs) and new helmet designs, as well as burn masks for burn patients. Robinette also led the way for the development of the Whole-Body scanning system, or WB-4. Able to perform a scan of the entire body within 17 seconds, WB-4 was the world's first full-body scanner. Today both the Army and the National Institute for Occupational Safety and Health (NIOSH) have full-body scanners.

After 10 years developing the CAESAR, Kathleen Robinette proves to be multi-dimensional. (Air Force photo)

Currently the director of the Computerized Anthropometric Research and Design laboratory, Robinette first came to the Air Force as a government contractor after earning a degree in anthropology from Wright State University. "I was working and living in Yellow Springs," said Robinette. "I saw an ad for an anthropologist in the Yellow Springs newspaper, applied, and got the job."

That job entailed taking pictures and body measurements for a study involving forty-six women in order to capture their images in 3-D. Robinette needed only 2 to 3 weeks to take the pictures and measurements but processing the data took a year to convert 1-D measurements into 3-D representations of the human form. Eventually, Robinette was hired by the Air Force to develop a faster, more accurate process for obtaining 3-D measurements and images. CAESAR is the culmination of Robinette's ten-year effort, containing thousands of 3-D scans from more than 4,400 civilians from the United States, The Netherlands and Italy.

Because Robinette has accomplished so much and with such fervor, people often see her as an energetic, outgoing, aggressive go-getter with a fiery personality. While she admitted that tact and patience may not be her strongest attributes, there is another side to Robinette—what she called her "real self." Indeed, a mere glance at her yellow Miata roadster suggests there's something under the surface, that there is more to this successful scientist than meets the eye.

Surprisingly, Robinette is shy. "I'm very shy," she confessed. "I constantly battle shyness in order to get things done. That's why CAESAR was a challenge. I had to deal with and talk to hundreds of people. For someone like me, calling people on the phone is an effort." Despite the personal challenge involved, the researcher noted CAESAR as her favorite and most significant professional accomplishment, "I met lots of people and learned how to take a group of people with different goals and get them all to agree and move forward."

In overcoming shyness, Robinette has learned a great deal from AFRL's Crew System Interface Division Chief, Maris Vikmanis. According to Robinette, Vikmanis has been her main teacher for ten years and has had the most influence on her professional life. She explained, "He taught me about dealing with and confronting people instead of avoiding them. He would say, 'This is what you need to do,' but I would have to do it. He encouraged me to go after things I didn't know that I could achieve; I probably wouldn't have done it otherwise."

continued on page 2

continued from page 1

Robinette has adopted other guiding principles in her work, revealing, " I don't want to be successful because I'm a woman; I want to be successful because I'm good at what I do." She believes that everything works out by making the most of opportunities. She also believes that having fun and doing a good job makes the difference in productivity and job satisfaction, and she's not afraid to show it. Well known throughout the Crew System Interface Division for her holiday decorating and costumes, Robinette once came to work dressed as a clown and passed out trinkets—and it wasn't Halloween. "I was feeling kind of blue," she said, "and thought that making other people laugh would make me feel better."

She's even been known to pull a practical joke or two, such as completely filling an office with black balloons in celebration of a milestone birthday or donning a scarf, lighting candles, and reading tarot cards while on temporary duty.

Apparently, Robinette's real self is just as diverse as the hats she collects—with nearly 100 to her credit. Archeology is still her first love, but she also enjoys reading, hiking, camping and running. In fact, Robinette has run three marathons, including the first Air Force marathon. Her husband, Paul, is quite proud of her and all she's done to help people and the Air Force. Her two sons seem to take it all in stride. "They think that all mothers do this. It's no big deal to them, " Robinette laughed.

From shy, award-winning scientist and runner to outgoing, practical joker and collector, the multi-dimensional Kathleen Robinette continues to make a lasting impression on the work and the people of the AFMC. **@**